

CLAIMS

1. A method of lining a drilled bore, the method comprising:
running a tubular into a drilled bore; and
corrugating the tubular in the bore.
2. The method of claim 1, wherein the corrugation of the tubular increases the collapse resistance of the tubular.
3. The method of claim 1, wherein the tubular is a thin-walled tubular.
4. The method of claim 3, wherein the tubular has a wall thickness of less than 6 mm.
5. The method of claim 4, wherein the tubular has a wall thickness of around 3 to 4 mm.
6. The method of claim 1, wherein the tubular has a wall thickness of at least 6 mm.
7. The method of claim 1, wherein the step of corrugating the tubular also diametrically expands the tubular.
8. The method of claim 1, wherein the tubular is run in through existing bore-lining tubing having an internal first diameter and the tubular is then expanded to an internal diameter at least as large as the first diameter.
9. The method of claim 1, wherein the tubular is diametrically expanded in a separate step from the corrugation step.

10. The method of claim 9, wherein the tubular is diametrically expanded before corrugation.
11. The method of claim 9, wherein the tubular is diametrically expanded after corrugation.
12. The method of claim 11, wherein the diametric expansion creates a cylindrical wall form.
13. The method of claim 1, wherein the tubular is corrugated from the top down.
14. The method of claim 1, wherein the tubular is corrugated from the bottom up.
15. The method of claim, wherein the tubular is expanded from the top down.
16. The method of claim 1, wherein the tubular is expanded from the bottom up.
17. The method of claim, further comprising the step of cementing the tubular in the bore.
18. The method of claim, wherein the tubular carries a deformable material on an external surface thereof.
19. The method of claim 1, wherein the tubular is provided in combination with a sleeve of deformable material.

20. The method of claim 1, wherein only a portion of the tubular is corrugated, retaining a section of cylindrical-walled tubular.
21. The method of claim 1, wherein all of the tubular is corrugated.
22. The method of claim 1, wherein the corrugations extend solely circumferentially.
23. The method of claim 1, wherein the corrugations extend helically.
24. The method of claim 1, further comprising locating at least one further tubular internally of the corrugated tubular.
25. The method of claim 24, wherein the at least one further tubular has a cylindrical wall.
26. The method of claim 24, wherein the at least one further tubular is subsequently diametrically expanded.
27. The method of claim 1, further comprising locating a tool within the corrugated tubular.
28. The method of claim 1, wherein the corrugations are formed by a rotary expander featuring at least one bearing member which applies a radial force to an inner wall of the tubular and which expander is rotated within the tubular, and is advanced axially through the tubular.
29. The method of claim 28, wherein the rotary expander is configured to create a single-start helical corrugation.
30. The method of claim 28, wherein the rotary expander is configured to

create a multiple-start plurality of helical corrugations.

31. The method of claim 1, wherein the tubular is located to intersect a problem formation.

32. A method of lining a drilled bore, the method comprising:
running a tubular into a drilled bore to intersect a problem formation;
and
corrugating the tubular in the bore at least where the tubular intersects the problem formation.

33. The method of claim 32, further comprising expanding the tubular.

34. A method of forming a downhole tubular, comprising corrugating a cylindrical tubular by rotating a rotary expansion tool relative to the tubular.

35. The method of claim 34, wherein the tool is advanced axially relative to the tubing to create at least one helical corrugation.

36. A thin-walled downhole tubular having a corrugated wall.

37. A downhole tubular having a corrugated wall, the tubular having been annealed following corrugation.

38. A downhole tubular having a wall defining helical corrugations and an elongate element located in the troughs of the corrugations.

39. The tubular of claim 39, wherein a signal carrier is located in the troughs of the corrugations.

40. The tubular of claim 38, wherein a conduit is located in the troughs of

the corrugations.

41. The tubular of claim 38, wherein a power carrier is located in the troughs of the corrugations.

42. The tubular of claim 38, wherein a sensing element is located in the troughs of the corrugations.

43. The tubular of claim 38, wherein an optical fibre is located in the troughs of the corrugations.

44. A downhole tubular having a corrugated wall and at least one object located in a trough in the wall.

45. A downhole tubular having a corrugated wall and material located in troughs of the wall.

46. The tubular of claim 45, wherein the troughs contain at least one of a sealing, filling and swelling material.

47. A method of sealing a tubular in a bore, the method comprising:
providing a downhole tubular having a corrugated wall and a sealing material located in troughs of the wall; and
running the tubular into a bore.

48. The method of claim 47, wherein the material fills and seals an annulus between the tubular and the bore wall.

49. A method of sealing a tubular in a bore, the method comprising:
providing a downhole tubular having a corrugated wall and a material located in troughs of the wall;

running the tubular into a bore;
diametrically expanding the tubular.

50. The method of claim 49, wherein expanding the tubular pushes the material out of the troughs.

51. The method of claim 50, wherein the material fills and seals an annulus between the tubular and the bore wall.

52. The method of claim 51, wherein the bore is defined by an existing tubular.

53. The method of claim 51, wherein the bore is defined by a well bore wall.

54. A method of running tubing into a bore to minimise differential sticking, the method comprising:
providing corrugated tubing; and
running the tubing into the bore.

55. A method of running tubing into a bore to minimise differential sticking, the method comprising:
identifying whether elongate members located in a selected bore are likely to encounter differential sticking;
providing corrugated tubing; and
running the tubing into the bore.

56. A method of running tubing into a bore, the method comprising:
running a corrugated-walled tubular into the bore; and
rotating the tubular in the bore.

57. The method of claim 56, wherein the tubular is a tubing string comprising a plurality of tubing sections joined by relatively rigid connectors.

58. The method claim 56, comprising rotating the tubing to dislodge sediment in the bore.

59. The method of claim 56, comprising rotating the tubing during a cementing operation.

60. The method of claim 56, comprising rotating the tubing during a bore-cleaning operation.

61. A method of running tubing into a bore, the method comprising:
running a tubular defining a helical configuration into the bore; and
rotating the tubular in the bore.

62. The method of claim 61, comprising rotating the tubing to advance the tubular axially in the bore.

63. The method of claim 62, comprising rotating the tubular a predetermined number of times to advance the tubular a predetermined axial distance in the bore, related to the pitch of the corrugations.

64. The method of claim 61, comprising rotating the tubing to negotiate a tight spot in the bore.

65. A downhole tubular for location in a lateral bore, the tubular having a corrugated wall.

66. A reelable downhole tubular, the tubular having a corrugated wall.

67. Downhole tubulars, each tubular comprising at least one corrugated end portion, whereby the tubulars are adapted to be coupled to one another by locating the corrugated end portion of one tubular within the corrugated end portion of another tubular.
68. The tubulars of claim 67, wherein the corrugations are helical.
69. The tubulars of claim 67, wherein the corrugations are circumferential.
70. The tubulars of claim 67, wherein the corrugated end portions are parallel.
71. The tubulars of claim 67, wherein the corrugated end portions are tapered.
72. The tubulars of claim 67, wherein deformable sealing material is provided on the corrugated end portion of at least one of the tubulars.
73. A downhole tubular having a corrugated upper portion adapted for engaging a tubing hanger.
74. A method of forming a tubing coupling between a first tubular and a second tubular in a bore, the method comprising:
 providing at least one of the first tubular and the second tubular with a corrugated portion; and
 running the first tubular into the second tubular such that the first tubular and the second tubular engage at the corrugated portion.
75. The method of claim 74, wherein the first tubular is hung from the second tubular.

76. The method of claims 74, wherein at least one of a lower end of the first tubing and an upper end of the second tubular is corrugated.

77. The method of claim 74, wherein a fluid flow path is provided between the first tubular and the second tubular.

78. The method of claim 77, comprising subsequently closing the flow path.

79. The method of claim 74, comprising subsequently expanding and flattening the corrugated portion.

80. A method of forming a coupling between first and second tubulars in a bore, the method comprising:

providing at least one of the first tubular and the second tubular with a corrugated portion; and

running the first tubular into second tubular such that at least one of the first tubular and the second tubular is elastically deformed to provide for positive engagement therebetween.

81. A method of locating a tubular within a larger diameter bore, the method comprising:

providing a corrugated tubular;

locating the tubular in a larger diameter bore; and

reducing the degree of tension applied to the tubular such that the tubular axially contracts and diametrically expands.

82. The method of claim 81, wherein the tubular is initially under tension.

83. The method of claim 81, wherein the degree of tension applied to the tubular is reduced by placing the tubular in compression.

84. The method of claim 81, wherein the degree of diametric expansion of the tubular is such that the tubular engages the surrounding bore wall.

85. Completion tubing having at least a portion of corrugated wall to accommodate a degree of at least one of axial compression and expansion.

86. The tubing of claim 86, in combination with a seal for locking a lower end of the tubing relative to surrounding bore-lining tubing.

87. A method of lining a bore, the method comprising:
diametrically expanding a corrugated tubular in a bore.

88. The method of claim 87, further comprising selecting at least one of the degree of expansion, the expansion method, and the degree of corrugation of the tubular such that the unexpanded tubular and the expanded tubular are substantially the same length.

89. A downhole device comprising portions adapted for engaging corrugations of a corrugated downhole tubular.

90. The downhole device of claim 89, wherein the device is a tractor.

91. The downhole device of claim 89, wherein the device is provided in combination with a sliding sleeve.

92. A subsea tubular comprising a wall element and at least a portion of the wall element being corrugated.

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93. A method of drilling a bore, comprising using a corrugated tubular as a drill bit support.
94. The method of claim 93, wherein the tubular is corrugated casing.
95. The method of claim 93, wherein the tubular subsequently diametrically expanded.
96. The method of claim 93, wherein the tubular is subsequently expanded to a parallel-walled form.